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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,292	06/24/2003	Tak M. Mak	42P15839	3207

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EXAMINER	
WACHSMAN, HAL D	

ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/603,292	MAK ET AL.	
	Examiner	Art Unit	
	Hal D Wachsman	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 June 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) *9-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 5-8* is/are rejected.

7)☒ Claim(s) *2-4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 June 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Applicant's election without traverse of species I (claims 1-8) in the reply filed on 12-7-04 is acknowledged.

2. Claims 9-24 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12-7-04.

3. The drawings are objected to because Figures 1 and 2 illustrate prior art techniques (see Brief Description of the Drawings) however these figures have not been labeled as "Prior Art". In addition, labeling (i.e. in words) is needed with respect to components 200, 208, 214 and 210, in Figure 2. Appropriate correction is required.

4. The first sentence of the Abstract states "A method is provided." However, this sentence does not elaborate further about the method. Appropriate correction is required.

5. Paragraph 0014, first line, of the specification refers to "DUT 100" however it appears that the correct component numbering for the DUT is "200". Appropriate correction is required.

6. On page 1, paragraph 0002, line 6, it appears that the word "that" is missing between the words "protocol" and "is".

7. Claims 1-8 are objected to under 37 C.F.R. 1.75(a) for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The preamble of claim 1 cites "A method, comprising:" but a method for what exactly is being referred to here ? The last step of claim 1 cites "providing an external path for test signals generated by the processor core during execution of the functional test program"

but does not particularly point out to what or for what the test signals are then being used for. In claim 1, line 2, "NUMA" needs to be defined. Claim 3, line 2, cites "the external paths" however the antecedent basis is singular. Claim 3, line 2, cites "the test signal" however the antecedent basis is plural. This same type of problem also occurs in claim 4, line 2. Claim 4, line 2, cites "capable of" which implies that the invention may or may not do what is being claimed here. The examiner asks the applicant to better claim the limitations cited above. While the examiner understands the intentions of the applicant he feels confusion could be drawn from the limitations cited above. Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. . Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 1, 7 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Larson et al. (6,601,183).

As per claim 1, Larson et al. (Abstract, figure 2, col. 2 lines 50-60, col. 5 lines 26-32, col. 6 lines 16-19) disclose "loading a local memory resource for a processor core....to access non-local memory resources through a link control mechanism". Larson et al. (Abstract, figure 4, col. 2 lines 54-60, col. 5 lines 27-30, 39-41) disclose "providing an external path for test signals...during execution of the functional test program".

As per claim 7, Larson et al. (Abstract, col. 1 lines 28, 29, col. 5 lines 47-49) disclose the feature of this claim.

As per claim 8, Larson et al. (col. 5 lines 45-48) disclose the feature of this claim.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

> invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larson et al. (6,601,183) in view of Rajsuman et al. (6,249,893).

As per claim 5, Rajsuman et al. (Abstract, col. 1 lines 34-38, col. 7 lines 28-32) teach the feature of this claim. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Rajsuman et al. to the invention of Larson et al. as specified above because as taught by Rajsuman et al. (col. 1 lines 33-36) microprocessor testing was considered one of the most complex problems in IC testing and in general an automatic test equipment (ATE) such as an IC tester was commonly used for testing a microprocessor.

As per claim 6, Rajsuman et al. (Abstract, col. 1 lines 34-38, col. 7 lines 28, 29, col. 8 lines 60-65) teach the feature of this claim. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Rajsuman et al. to the invention of Larson et al. as specified above

because as taught by Rajsuman et al. (col. 1 lines 33-36) microprocessor testing was considered one of the most complex problems in IC testing and in general an automatic test equipment (ATE) such as an IC tester was commonly used for testing a microprocessor.

12. Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and subject to the appropriate correction of the 37 C.F.R. 1.75(a) objections noted in paragraph 7 above.

13. The following references are cited as being art of general interest: Bordaz et al. (6,195,731) which disclose non-uniform memory access with a linking mechanism, Barroso et al. (6,668,308) which disclose a chip-multiprocessing system, Kittross et al. (6,681,351) which disclose easy to program automatic test equipment, Lee et al. (6,842,857) which disclose concurrently booting multiple processors in a non-uniform memory access machine, Baxter et al. (6,026,461) which disclose a cache coherent non-uniform memory access and Brock et al. (6,499,028) which disclose a performance monitor for a NUMA computer.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal D Wachsman whose telephone number is 571-272-2225. The examiner can normally be reached on Monday to Friday 7:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hal D Wachsman
Primary Examiner
Art Unit 2857

HW
February 6, 2005